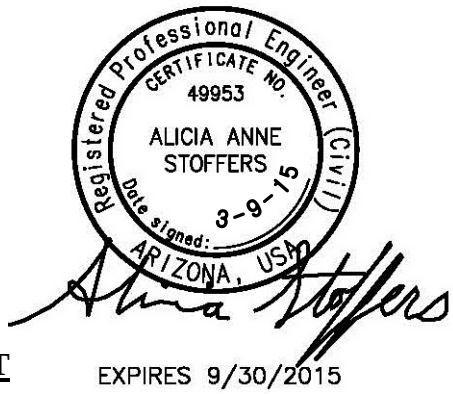

EXPIRES 9/30/2015

SPECIAL PROVISIONS

BONITO STREET IMPROVEMENT PROJECT

PREPARED BY WOODSON ENGINEERING & SURVEYING, INC.

CITY OF FLAGSTAFF PROJECT NO. 03-13012

INTRODUCTION

Modifications to the MAG Specifications, Arizona Department of Transportation Specifications (ADOT), and to the Preceding General Provisions are made in the Special Provisions and take precedence over the MAG and ADOT Specifications and the General Provisions. Where there is no conflict between MAG Specifications, ADOT Specifications and the General Provisions, the Special Provisions are to be construed as being additions to the Specifications. In cases of conflict between the other Specifications and the Special Provisions, the Special Provisions are to be construed as supplanting only the conflicting portions of the other Specifications.

MAG UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE GENERAL PROVISIONS ARE HEREBY AMENDED TO INCLUDE THE FOLLOWING:

PART 100 – GENERAL CONDITIONS

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

102.4 EXAMINATION OF PLANS, SPECIAL PROVISIONS AND SITE OF WORK:

Revise the second paragraph to read:

The bidder shall examine the site of the proposed work and all documents pertaining to the work. It is mutually agreed that the submission of a proposal shall be considered prima facie evidence that the bidder has made such examination and is familiar with the character, quality and quantity of the work to be performed and material to be furnished.

SECTION 104 – SCOPE OF WORK

104.1 WORK TO BE DONE

104.1.1 General

(revise to include the following)

The Bonito Street Improvement project generally includes the following components:

- Replace sewer and water mains in Bonito Street
- Replace all sewer and water services on Bonito Street
- Install new storm drain system in Bonito Street

- Mill and overlay pavement
- Remove and replace pavement
- Remove and replace curb and gutter as indicated
- Remove and replace driveways and sidewalks as indicated
- ADA Sidewalk ramps

Pre-Construction Video

The contractor shall record and provide the City with a pre-construction video (in readable format) of the full construction area prior to mobilization, paying special attention to the private property boundary and private improvements. This video will serve as a record of preexisting conditions and it is in the best interest of the contractor to record a thorough document for the record.

Plan Redlines

The contractor shall be required to maintain an as-built "red-line" set of construction plans that fully describes work that deviated from the approved plans and submit a set to City Inspection and the Engineer of Record at the completion of work.

104.1.2 MAINTENANCE OF TRAFFIC
(revise to include the following)

The detailed traffic control plan shall be submitted to The Transportation Program and approved by the City of Flagstaff prior to the start of work. The plans shall include provisions for access to all adjacent private properties within the project area. Through advance written notice and coordination with the City's Project Representative and the property owners, the Contractor may temporarily limit a vehicular or pedestrian access to a property only if acceptable alternate access is provided.

The Contractor shall be required to provide no less than one (1) week advance written notice of all street closures and traffic restrictions, and commencement of construction activity to all affected property owners, business owners, residents, and the surrounding neighborhood as well as to the Engineer. The City Representative will indicate the limits of the notification. The notice shall include the projected date, and duration of the closure and alternate detour routes. Each notice shall include the Contractor's name, contact person and local telephone number as well as the Owner's name and telephone number.

Existing pedestrian and bicycle facilities shall be continued through or detoured around the construction zone.

Transit stops and pedestrian access thereto shall be maintained. Should construction occur during the school year, any existing school bus stops will need to be temporarily relocated to another location acceptable to the Flagstaff Unified School District Transportation Director. The Contractor shall coordinate any school bus relocations through the Flagstaff Unified School District Transportation Director, Joe Martin at 928-527-2300.

Flagstaff High School, Marshall Elementary School and Victorious Life Christian Center all use the Bonito Street corridor for access. All closures required must include notification and detour information for all agencies affected. Contractor shall contact appropriate authorities 20 working days prior to any closures on Bonito Street to coordinate access.

The Contractor shall avoid closures and disruptive construction activities when possible on days of expected peak traffic at these institutions. Please coordinate with faculty for all possible scheduled events.

Special Access Requirements:

The Contractor shall maintain access to all side streets, access roads, driveways, alleys, parking lots and to adjacent businesses at all times during their hours of operations. This includes any home-based businesses within the residential area. Access to all residential driveways shall be provided during all non-working hours. Where a property has more than one driveway, no more than one access will be restricted or closed at one time. Should it be necessary to close access to private property, business, driveways or alley entrances, the closure must be for as short a time as possible and be restored at the end of the work shift. If primary residential or business access cannot be restored, the Contractor shall provide an alternative, which will be coordinated with the resident/business and pre-approved by the Owner prior to any restrictions being implemented.

Sanitation Pickup:

Regular sanitation pickup in the area of this project is scheduled every Monday and Thursday. When construction activity interferes with sanitation pickup, the Contractor shall provide for sanitation vehicle access to the affected properties or relocate the trash containers where access is acceptable. Contact the Solid Waste Services of the Public Works Department at 774-0668.

Traffic Control and Safety:

At the time of the Pre-construction Conference, the Contractor shall designate an employee, other than the Project Superintendent, who is well qualified and experienced in construction traffic control and safety, to be available on the project site during all periods of construction to coordinate and maintain safe barricading whenever construction restricts traffic. The contractor shall designate and provide the contact information of one person who shall be available during non-construction hours in case of any traffic control and/or safety items that need to be handled in an urgent manner. This representative must be within 20 minutes response time from the project area and must be able to operate equipment. Traffic control shall include pedestrian as well as vehicle traffic.

Emergency Access:

All roadway closures shall be coordinated by the Contractor with the City's Project Representative at each weekly meeting or at least 72 hours in advance of the roadway closures. The Contractor shall forward the street closure information to the Fire Department and Police Department.

U.S. Postal Service Access:

The Contractor shall be responsible for maintaining access for Postal Service within the project area at all times. The Contractor shall coordinate this work to avoid interruption of mail service. Mailboxes shall be protected in place. Should an existing mailbox be damaged by construction activity, the Contractor shall promptly remove and replace the damaged mailbox with like kind; including post and foundation, at no cost to the resident or the City. Placement of any mailbox shall be in accordance with USPS requirements.

SECTION 105 – CONTROL OF WORK:

105.5.1 WEEKLY CONSTRUCTION MEETING:
(revise to include new sub-section)

The Contractor's Superintendent shall attend weekly construction progress meetings. The Contractor representative shall be prepared to discuss construction schedule, construction activities projected for the next two weeks, problems, issues and any other pertinent project details as may be required by the City's representative.

105.5.2 PROTECTION OF WORK:
(revise to include new sub-section)

The Contractor is required to protect work during inclement weather. The contractor shall grade areas to drain and utilize pumps to remove ponding water immediately during all stages of construction during both working and non-working hours.

105.8 CONSTRUCTION STAKES, LINES, AND GRADES

Unless noted otherwise in the contract documents, the Contractor shall layout the work from the lines, grades and dimensions shown on the drawings. The Contractor shall be responsible for all such work for the duration of the project. Any dimension or grade errors shall be immediately transmitted in writing to the Owner for clarification, before proceeding with the work.

SECTION 107 – LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC:

107.2 PERMITS:
(revise to include the following)

The Contractor shall be required to obtain City, ADEQ, and other required permits.

Erosion Protection and Site Restoration

The size of this project is greater than one (1) acre. The Contractor is required to submit a Notice of Intent and a Notice of Termination to the Arizona Department of Environmental Quality. The Contractor shall use best management practices (BMP) in controlling stormwater runoff. A stormwater pollution prevention plan (SWPPP) has been included in the construction documents for the Contractor's use. The contractor shall develop and maintain a SWPPP inspection and maintenance binder that is to be kept on site during construction.

Measurement and Payment

Measurement shall include all items required to comply with the requirements of the AZPDES permit program and City of Flagstaff requirements. The cost for obtaining and complying with the AZPDES permit, inspection documentation, erosion control devices and all work associated

with stormwater protection shall be included in the pay item for SWPPP.

107.2.2 HANDLING, REMOVAL AND DISPOSAL OF SURPLUS MATERIAL AND ASBESTOS CONTAINING MATERIALS (ACM)
(revise to include new sub section)

The Contractor is responsible for handling, removal and disposal of all soil and construction material generated by the project as described in the General Provisions. The City requires compliance with Environmental Protection Agency (EPA), Arizona Department of Environmental Quality (ADEQ) and Occupational Safety and Health Administration (OSHA) asbestos regulations for all City projects. Utility pipes constructed of materials other than metal or polyvinyl chloride (PVC) require testing prior to any disturbance of the pipes to determine if regulated levels of asbestos are present in the pipe material. Suspect pipe materials requiring testing typically include vitrified clay and cement pipe (transite). Asbestos testing is not required for metal pipes. City Public Works/Sustainability & Environmental Managements staff are available to collect samples and submit the samples for analyses with small charges for the testing. If the pipe does not contain regulated levels of asbestos the contractor may disturb and remove the piping. If utility piping contains regulated levels of asbestos, an asbestos abatement contractor must perform any disturbance/removal of the pipe materials. This is required to ensure workers are not exposed to any asbestos fibers.

Work may require the proper handling, removal and disposal of regulated asbestos piping and materials generated by cutting or breaking the pipe to remove it from the ground. If asbestos containing materials (ACM) removal is necessary on the project, the City of Flagstaff requirements for handling, removal and disposal are as follows:

If an infrastructure or building material that is not either wood, glass or metal is encountered during the project and has not yet been either assumed or positively identified to be ACM then the material(s) must be sampled in accordance with regulations generated by the EPA Asbestos Hazard and Emergency Response Act (AHERA) 40 CFR 763 as well as OSHA 29 CFR 1910.1101, by a certified AHERA Building Inspector and sent to a National Voluntary Laboratory Accreditation Program (NVLAP) certified laboratory for analysis.

Once materials of concern are either agreed to be assumed or properly identified to be ACM then the material is required to be removed according to OSHA 29 CFR 1910-1926.1101 by a certified asbestos abatement worker, and NOT a general contractor (GC). However, if the GC holds the appropriate asbestos certifications (AHERA Asbestos Operations and Maintenance), which the City would need to verify is current, then the GC could perform the asbestos abatement.

The City requires the GC arrange for abatement of assumed and/or identified ACM by a certified asbestos abatement contractor as well as arrange area and/or clearance air monitoring by a third party certified asbestos consultant. If applicable to the project, copies of abatement activities and air monitoring shall be provided to City of Flagstaff Environmental Management staff.
In the event of large disturbances to ACM, compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 61, Subpart M shall be followed. Notification

would be required the Arizona Department of Environmental Quality 10 working days in advance of the start of a large project.

http://www.azdeq.gov/environ/air/asbestos/

This notification is not typically required for utility pipe work, but could be required for a very large project involving numerous saw cuts of utility pipes.

If ACM removal is necessary on the project, the City of Flagstaff requirements for ACM disposal at the City's Cinder Lake Landfill are as follows:

Only non-friable asbestos waste is accepted for disposal at Cinder Lake Landfill. PRIOR to disposal of non-friable ACM, obtain the necessary forms, which are:

- Non-Friable Asbestos Waste Acceptance Application and accompanying instructions
- Non-Friable Asbestos Waste Shipment Record (WSR)

The Asbestos Waste Acceptance Application is available at the City of Flagstaff's website http://www.flagstaff.az.gov/index.aspx?NID=929 or by contacting the City of Flagstaff Environmental Management staff at (928) 213-2146 or 2151. Fax the completed Non-Friable Asbestos Waste Acceptance Application to (928) 213-3636. Once faxed to the EM Office the application will be reviewed, signed and faxed back to you, normally within one (1) working day. A Waste Shipment Record is required to accompany each load of non-friable asbestos waste taken to the Cinder Lake Landfill. Forms contain multiple carbon copy sheets and need to be obtained from the Cinder Lake Landfill (928) 527-1927 or City of Flagstaff Environmental Management staff (phone numbers above).

Assure the non-friable ACM is properly handled and wrapped. Non-friable ACM must be thoroughly wetted using amended water PRIOR to being wrapped in 6-millimeter poly and be tightly sealed with duct tape. If the material is heavy (such as transite pipe), has sharp edges, or may easily puncture the poly wrap, a double layer of poly will be necessary. The Cinder Lake Landfill scale house attendant will inspect the load to ensure it is properly wrapped. Containers holding non-friable ACM shall be carefully unloaded and placed in a designated location. Dumping using a hydraulically lifted bed of a truck is not permitted (dump truck), as the poly wrap may be torn open.

If using a large bin for disposal, attach a copy of the Waste Shipment Record to the disposal bin. If not using a City of Flagstaff disposal bin, make sure the delivery driver takes a copy of the SIGNED Non-Friable Asbestos Waste Acceptance Application and the Waste Shipment Record to the Cinder Lakes Landfill with the waste delivery. If using a City of Flagstaff disposal bin call City Environmental Services at (928) 774-0668 to schedule a pick-up for the disposal bin. Please be sure to provide the driver with the SIGNED Non-Friable Asbestos Waste Acceptance Application and the Waste Shipment Record and be sure to clarify if you would like the disposal bin emptied and removed, or emptied and returned to the work site. When disposal is completed, the Landfill Manager will sign the Waste Shipment Record and landfill staff will provide or mail a copy of the Waste Shipment Record.

Cutting of utility pipes generates Regulated Asbestos Containing Material (dust from cutting)

and breaking pipes may generate RACM. RACM requires disposal at the Joseph City Landfill or at other landfills located in southern Arizona.

All work relating to the testing, removal, and disposal of materials as described above shall be incidental to the project and no separate payment shall be made for this work.

107.9 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE:

(revise to include the following)

The Contractor shall take special care to control construction-related dust and noise and to keep the project site cleaned up to the greatest extent possible. The Contractor is responsible to coordinate alternate measures for any impacted operations as mentioned which are acceptable to the parties involved.

Survey monuments and property corners shall be protected and not disturbed unless specifically called out on the plans for replacement. All costs associated with protecting or re-establishing disturbed survey monuments and property corners shall be borne solely by the Contractor.

The Contractor is responsible for replacing and/or restoring landscaping (including but not limited to fences, retaining walls, landscape walls, pavers, aggregate rock ground cover, plantings, sod) and owner improvements associated with the project to a pre-existing condition. All cost shall be included in the bid as incidental to the work, unless specified in the bid schedule or plans.

The Contractor is responsible for removing existing improvements and salvaging items for relocation after the public improvements are finished. This may necessitate close coordination with property owners. The contractor is responsible for replacing materials in like kind. All cost shall be included in the bid as incidental to the work.

The curb, gutter and sidewalk on the east side of Bonito Street shall be protected in place. With the exception of areas disturbed by proposed utility work, the existing improvements beyond the edge of pavement shall remain in current condition.

107.11 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES: (revise to include the following)

The Contractor is responsible for providing written notification to each affected resident at least 48 hours prior to any disruption to water or sewer service in the construction area. The notice must include the exact time of the disruption of service and the expected duration of the loss of service.

The Contractor is responsible for providing written notification to each affected resident at least 72 hours prior to any disruption to reclaimed water service in the construction area. The notice must include the exact time of the disruption of service and the expected duration of the loss of service.

The Contractor shall protect existing water, sewer, and gas service lines where the proposed work crosses individual service lines.

Not all service lines are shown on the plans and it is the Contractor's responsibility to determine their location in the field at the beginning of the project. The contractor shall coordinate all necessary utility relocations directly with the appropriate utility franchise and provide sufficient time for response prior to construction of the improvements. The

Contractor shall verify location, direction and grade of existing sanitary services at the locations where new storm drain is being installed to verify that no conflicts exist. This investigation and coordination is considered incidental to the project.

Protection or repair of existing service lines not in conflict with the work is also considered incidental. In the event that there is a physical conflict between an existing service line and the proposed work, the Contractor shall immediately notify the Engineer of the conflict. The Owner will make a determination as to how the conflict will be resolved. Any extra work required as a result of an unforeseen service conflict will be ordered and paid for in accordance with General Provision Section 104.2.3.

Locations of underground utilities shown on the plans are to be regarded as approximate only. Cable, telephone and power utilities are generally overhead in the alley ways.

107.12 FURNISHING RIGHT OF WAY:

(Revise to include the following)

The Contractor shall insure that all employees of the Contractor, subcontractors, agents or invitees are clearly informed regarding the proximity of private property boundaries and that UNDER NO CIRCUMSTANCES shall any worker cross that boundary into private property, exceptions described below.

Temporary Rights of Entry has been obtained from the property owners adjacent to Bonito Street in order to allow for grading, sidewalks, driveway connections, utility connections and fence relocations.

SECTION 108 – COMMENCEMENT, PROSECUTION AND PROGRESS:

108.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

(revise to include the following)

There are several contingency items included in the contract bid schedule. Time to perform these established work items at their indicated quantities shall be included in the contactor's original work schedule. The 150-day contract duration has been established to include time to perform the contingency work and the contractor shall be prepared with appropriate labor and equipment to perform the work in the time allotted. Additional contract time may be requested if these contingency quantities over run the original quantities.

108.5 LIMITATIONS OF OPERATIONS:

(revise to include the following)

Work on Saturdays will be permitted, as necessary, as approved by the City's Public Works Inspection Supervisor. Seventy-Two hours advance notice will be required. Work on Sundays and legal City holidays will not be permitted except in emergencies.

108.7 DETERMINATION AND EXTENSION OF CONTRACT TIME:
(delete the second paragraph of General Provisions Section 108.7 and replace with the following)

The contract time, including final clean-up of the project site and storage areas, may be extended as a result of weather conditions that cannot be reasonably anticipated. The number of actual days that the scheduled work is actually impacted by adverse weather shall be recorded monthly during the construction period.

The Contractor will be entitled to a contract time extension if the actual adverse weather days experienced during the work exceed the anticipated adverse weather days shown. The following is the monthly schedule of adverse weather days that shall be anticipated by the Contractor in scheduling the work:

TABLE 108.7
MONTHLY ANTICIPATED ADVERSE WEATHER CALENDAR DAYS

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
MONTHLY ANTICIPATED ADVERSE WEATHER CALENDAR DAYS	**7 days**	**7 days**	**8 days**	**6 days**	**4 days**	**3 days**
AVERAGE MONTHLY PRECIPITATION	1.98”	1.96”	2.05”	1.34”	0.68”	0.51”
MONTH	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
MONTHLY ANTICIPATED ADVERSE WEATHER CALENDAR DAYS	**12 days**	**11 days**	**7 days**	**5 days**	**5 days**	**6 days**
AVERAGE MONTHLY PRECIPITATION	2.78”	2.68”	1.82”	1.52”	1.49”	1.90”

The above schedule of anticipated adverse weather days establishes the base line for the project’s monthly weather impacts, based on historical records, as recorded by the National Weather Service at Pulliam Airport, for precipitation in excess of 0.01 of an inch per calendar day.

The number of actual days that scheduled work is impacted by adverse weather as defined above

shall be recorded weekly during the contract period. It is the Contractor's responsibility to request in writing any claims for the delay of critical work within two working days of experiencing adverse weather and associated project delays. Any adverse weather day requests that are not received as stated above shall not be considered nor approved. Once the number of approved actual adverse weather days exceeds the number of anticipated adverse weather days in the schedule above, the Contractor is entitled to a contract time extension. Actual adverse weather days must also prevent work for fifty (50) percent of more of the Contractor's work day and delay scheduled work critical to the timely completion of the project. The City will convert any delays meeting the above requirements to calendar days and extend the contract period as necessary. No additional compensation will be allowed for direct and indirect overhead expenses associated with any such contract time extensions. The Contractor's schedule must include the above anticipated adverse weather delays on a month-by-month basis during the contractor's normal working schedule.

SECTION 109 – MEASUREMENTS AND PAYMENTS

109.4 COMPENSATION FOR ALTERATION OF WORK:

(Revise to include)

Allowance and Contingency items will only be paid if explicitly authorized in writing by the City's project representative for the following items:

Contingency #1 Rock Excavation
Contingency #2 Unsuitable Materials
Contingency #3 Subgrade Stabilization (Geogrid)
Contingency #4 Pavement Crack Repair

PART 200 – ROADWAY EXCAVATION

SECTION 205 – UNSUITABLE MATERIAL

205.2 UNSUITABLE MATERIAL:

Revise to read:

Material shall be considered unsuitable for fill, subgrade, shoulders and other uses if it contains organic matter, soft spongy earth, other matter of such nature, or excessive moisture that compaction to the specified density is unobtainable. The extent of the unsuitable material shall be identified and measured in the field by the city inspector.

Material that is unsuitable for the intended use shall be excavated from within the identified limits, removed from the site or otherwise disposed of as directed by the Engineer and replaced with suitable material in accordance with Section 210.

The removal and disposal of unsuitable material and replacement of suitable material will be paid for at the contract unit price per cubic yard of UNSUITABLE MATERIAL and paid out of Contingency Item #2. Such price shall include the excavation, disposing of unsuitable material, placement of suitable material, and compaction.

SECTION 211 – FILL CONSTRUCTION

211.3 COMPACTING:

Revise the last sentence of the fifth paragraph to read:

Each layer shall be compacted to a uniform density of not less than 95 percent, or as directed by the Engineer.

PART 300 – STREETS AND RELATED WORK

SECTION 301 – SUBGRADE PREPARATION

301.3 RELATIVE COMPACTION:

Revise to read:

The subgrade shall be scarified and loosened to a depth of 9 inches. When fill material is required, a layer of approximately 3 inches may be spread and compacted with the subgrade material to provide a better bond. The subgrade cut and fill areas shall be constructed to achieve a uniform soil structure having the following density when tested in accordance with AASHTO T-99, Method A; T-191 or ASTM D-2922; and D-3017 with the percent of density adjusted in accordance with the rock correction procedures for maximum density determination, standard detail #190, to compensate for the rock content larger than that which will pass a No. 4 sieve:

a.	Major streets	95 percent
b.	Other streets and traffic ways	95 percent
c.	Curbs, gutter and sidewalks	90 percent

SECTION 306 – MECHANICALLY STABALIZED SUBGRADE – GEOGRID REINFORCEMENT:

306.1 DESCRIPTION:

Revised to read:
Geogrid Reinforcement is included in the contract as a contingency and will be installed per MAG SS 306 to aid stabilization of subgrade if necessary per City representative direction.

306.8 PAYMENT:

Revised to read:
All Geogrid Reinforcement, complete in place, will be paid for at the contract bid prices out of Contingency Item #3, Subgrade Stabilization (Geogrid).

SECTION 310 – UNTREATED BASE

310.2 PLACING:

Revise the fourth paragraph to read:

Untreated base may vary not more than ¼ inch above or below required grade and cross-section.

All curb and gutter, sidewalk, driveways and sidewalk ramps shall be constructed on a minimum 3 inches of aggregate base course (ABC). The Untreated Base shall be compacted to 95% relative density under curb/gutter, sidewalk, driveway and alley entrances, handicap ramps, and catch basins.

SECTION 317 – ASPHALT MILLING

317.2 CONSTRUCTION REQUIREMENTS:

Revise the second paragraph to read:

The milling cut depth shall be the depth indicated on the Plans plus or minus 1/8 inch. Milling adjacent to curb and gutter shall be to a depth of 2" below the lip of gutter. In some areas, the existing pavement adjacent to curb and gutter is higher than the lip of gutter and this may result in milling more than the nominal 2" milling depth. The milling machine shall have electronic grade controls. Contractor shall remove the milled material and sweep the roadway clean with a power pick-up broom to the satisfaction of the Engineer.

Revise the fifth paragraph to read:

Prior to milling, the contractor shall be responsible for verifying that the existing asphalt is at least 5" thick at 75' stations along the length of the mill and overlay section. The Contractor shall use a method approved by the Engineer. The Contractor shall immediately notify the Engineer when:

- The existing pavement thickness is less than 5".
- Breaking of the underlying material occurs during milling.
- Delamination of underlying material occurs during milling.

SECTION 321 PLACEMENT AND CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT

321.3 WEATHER AND MOISTURE CONDITIONS:

Revise to read:

Asphalt concrete shall be placed only when the surface is dry, and when the ambient temperature in the shade is 40 degrees F or above and rising, or above 50 degrees F if falling. No asphalt concrete shall be placed when the weather is foggy, or rainy, or when the base on which the material is placed is unstable, is in a wet condition (in excess of optimum), or in a frozen condition. Asphalt concrete shall be placed only when the Engineer determines that weather conditions are suitable.

The determination by the Engineer of unsuitable weather conditions for paving operations shall not be cause for extension of the Contract Time. The Contractor must show that such weather conditions were not reasonably anticipated. Any request for an extension of the Contract Time shall be in accordance with Section 108.7 of the MAG Standard Specifications and Section 108.7 of these Special Provisions.

321.7 TRANSPORTATION:

Add a fourth paragraph to read:

Sufficient trucks shall be available to enable paving to proceed continuously. Failure to provide a sufficient number of trucks may be considered a failure of the Contractor's responsibilities under

Section 108.6 of the MAG Standard Specifications.

321.8 PLACEMENT:
321.8.2 Joints:
Revise the third sentence of the first paragraph to read:

The surface in the area of the joint shall not deviate more than ¼ inch from a 10-foot straightedge, when tested with the straightedge placed across the joint, parallel to the centerline.

321.8.4 Compaction; Asphalt Base Course and Surface Course:
Revise the fourth paragraph to read:

Achieving the required compaction is the responsibility of the Contractor. The Contractor shall determine the equipment and pattern of rolling that will provide the proper compaction, at his expense. The Engineer will determine the acceptability of the pavement compaction in accordance with Section 321.10 of the MAG Standard Specifications.

321.8.5 Smoothness:
Revise to read:

The completed surfacing shall be thoroughly compacted, smooth, true to grade and cross-section, of uniform texture and appearance, and free of ruts, humps, roller marks, depressions or irregularities. An acceptable surface shall not vary more than one-fourth (1/4) inch from the lower edge of a 10-foot straightedge when the straightedge is placed parallel to the centerline of the roadway.

321.8.6 Asphalt Concrete Overlay:
Revise Subsection (b) of the third paragraph to read:

(b) Before placing asphalt concrete overlay, milling shall be done as shown on the plans or as specified in the special provisions and shall be in accordance with Section 317. After completion of the asphalt milling, the Contractor and the Engineer shall inspect the milled pavement surface to determine the extent of existing pavement cracks and repairs. There are two types of crack repairs.

Pavement cracks with a width of up to 2 inches shall be crack sealed in accordance with the Pavement Crack Sealing Detail in the Plans and Section 337.

Cracks with a width greater than 2 inches shall be removed and repaired in accordance with the Pavement Repair Detail in the Plans and Section 336.

The Contractor will locate each type of repair and develop quantities for approval by the Engineer prior to beginning any work. All crack sealing is incidental to the 2” AC overlay. All crack repairs, complete in place, will be paid for at the contract bid prices out of Contingency Item #4, PAVEMENT CRACK REPAIR.

SECTION 337 CRACK SEALING

337.1 GENERAL:
Revise the first paragraph to add:

A 12”-wide ½” thick layer of gap-graded asphalt concrete will be placed on top of sealed cracks to act as a bond between the milled pavement surface and a 12”-wide paving fabric interlayer.

337.2 MATERIALS:
Revise to add:

Asphalt concrete shall be **½”** mix design in accordance with Section 321 of the MAG Standard Specifications.

Pavement fabric interlayer shall be in accordance with Section 321 of the MAG Standard Specifications.

337.5 CLEANING AND PREPARING CRACKS OR JOINTS:
Revise to read:

Prior to application of polymer modified asphalt rubber, all cracks or joints shall be cleaned out of any debris and dust. As directed by the Engineer, final cleaning of the cracks or joints shall be vacuumed. Prior to placement of the layer of bonding asphalt concrete, the milled pavement surface shall be cleaned of debris and dust.

337.8 MEASUREMENT:
Revise to read:

The cleaning and sealing of cracks or joints shall be measured along the centerline of the crack or joint by the linear foot to the nearest foot, complete in place.

337.9 PAYMENT:
Revise to read:

All crack sealing is incidental to the 2” AC overlay.

SECTION 340 CONCRETE CURB, GUTTER, SIDEWALK, SIDEWALK RAMPS, DRIVEWAY AND ALLEY ENTRANCE

340.1 DESCRIPTION:
Revise to read:

The various types of concrete curb, gutter, sidewalk, sidewalk ramps, driveways, and alley entrances shall be constructed to the dimensions indicated on the plans and MAG Standard Details with all applicable modifications as per the City of Flagstaff Standard Details as referenced on the plans. This work shall also consist of retrofitting detectable warning strips at

designated existing sidewalk ramps.

All curb and gutter, sidewalk, driveways and sidewalk ramps shall be constructed on a minimum 3 inches of aggregate base course (ABC). The ABC shall be compacted to 95% relative density.

Unless otherwise noted for removal and replacement, the contractor shall protect all curb and gutter that is to remain in place. Removals outside the plan limits not approved by the owner shall be replaced at the contractor's expense.

340.2 MATERIALS:
Revise the first paragraph to read:

Concrete shall be Class A, containing 5 to 7 percent air entrainment, and conform to the applicable requirements of Section 725.

340.2.1 DETECTABLE WARNINGS:
(revise to include the following)

All detectable warning devices used on the project shall be cast iron plates manufactured by East Jordan Iron Works or approved equal. The cost of the detectable warnings is included in the cost of the ramp replacement.

SECTION 345 ADJUSTING FRAMES, COVERS, VALVE BOXES AND WATER METER BOXES

345.2 ADJUSTING FRAMES:
Revise the second paragraph to read:

Frames shall be set to the elevations and slopes established by the Engineer and shall be firmly blocked in place with masonry or metal supports. Spaces between the frame and the old seat shall be sealed on the inside to prevent any concrete from entering the hand hole or manhole. Class A concrete, with 5 to 7% air entrainment, shall be placed around and under the frames to provide a seal and properly seat the frame at the required elevation and slope. Concrete shall be struck off flush with the top of the existing pavement.

For new manholes, the maximum dimension from top of the lid to the top of the cone shall be 22". The maximum dimension from the top of the lid to the bottom of the flat top shall be 24". For existing manholes to be raised in previously paved areas, the maximum dimension from the final finished grade to the bottom of the manhole neck shall be 32 inches. It is the contractor's responsibility to examine each existing manhole and determine the exact nature of work required to adjust each manhole.

345.3 ADJUSTING VALVE BOXES:
Revise the second paragraph to read:

Adjustable cast iron boxes shall, if possible, be brought to grade by adjustment of the upper

movable section. Any excavated area shall be filled with Class A concrete, with 5 to 7% air entrainment, per standard detail, or as directed by the Engineer.

Revise the second sentence of the third paragraph to read:

This collar shall be Class A concrete with 5 to 7% air entrainment.

PART 400 – RIGHT OF WAY TRAFFIC CONTROL

SECTION 401 – TRAFFIC CONTROL:

401.8 TRAFFIC CONTROL:

(revise to include new sub-section)

The Contractor is required to provide a Work Plan with a detailed Traffic Control Plan, Phasing Plan and Property Access Plan per MAG Specification Section 401. This plan shall be submitted for approval to the City of Flagstaff Transportation Program.

At all times, the contractor shall conduct the construction activities to safeguard pedestrians and vehicular access in the vicinity of the project. All holes or trenches left open overnight shall be surrounded by Type II barricades and Type A flashing warning lights, connected by warning tape or rope, as directed by the Engineer. The contractor shall provide plywood coverings or some other protection over holes satisfactory to the Engineer. There will be no direct measurement or additional payment for providing coverings or the warning tape, Type II barricades or rope, the costs being considered as included in the original cost of the contract.

Payment:

All traffic control for this project shall be included as a component of the overall lump sum bid item for the Construction Traffic and Pedestrian Control item, inclusive of all labor, devices, and Police necessary to accomplish a safe work environment.

SECTION 405 MONUMENTS

405.2 MATERIALS:

Revise the second paragraph to read:

All concrete shall be Class A with 5 to 7% air entrainment.

PART 600 – WATER AND SEWER

SECTION 601 – TRENCH EXCAVATION, BACKFILLING AND COMPACTION:

601.2 EXCAVATION:
(revise to include)

If rock is encountered during trenching, the volume of rock shall be calculated in cubic yards. Prior to proceeding with removal, the Contractor shall obtain authorization in writing by the City's project representative in order to receive

601.7 PAYMENT:
(revise to include)
Rock Excavation Payment shall be made out of Contingency Item #1 and will be full compensation for the item.

SECTION 610 – WATER LINE CONSTRUCTION:

610.9 FIRE HYDRANTS:
(revise to include)

Fire hydrant locations may be field adjusted as indicated by the City during construction. No additional compensation will be allowed for relocation.

610.11 WATER SERVICE CONNECTIONS:
(revise to include)

A water service that is not in use may be abandoned in place and no new service will be constructed in the location. Contractor shall investigate appropriately to be absolutely sure that there is no existing use of the service.

If additional services are discovered that appear to not be used, the Contractor must contact the Utilities Department to gain approval to abandon in place and not construct the replacement service.

Resetting water meters and connection to the private service line is included in the remove and replace service bid items.

SECTION 615 – SEWER LINE CONSTRUCTION:

615.1 DESCRIPTION:
Revise the first paragraph to add:

The work shall also include providing sewer flow diversion during sewer line construction.

615.4 LAYING PIPE:
Add Subsection 615.4.1 to read:

615.4.1 SEWAGE FLOW DIVERSION:

615.4.1.1 Description:
The Contractor shall design and provide all labor, materials, and equipment to install and operate a sewage bypass system that bypasses sewage flows around each sewer rehabilitation work area. Each bypass system shall extend the entire length of the section of pipeline rehabilitation and shall remain in operation until the sewer rehabilitation work is complete and accepted by the Engineer. All bypass flows shall be discharged into a downstream sanitary sewer manhole. Bypass flows shall not be directed to ground surface receiving waters, storm drains, or wherever groundwater contamination is possible. The bypass system shall maintain flow to prevent wastewater backup into customer fixtures or discharge to the environment.

The design of the bypass system is the responsibility of the Contractor and shall be prepared and submitted to the Engineer for review and approval. The Contractor shall have each bypass system in place and tested before bypassing any sewage. The Contractor shall notify the Engineer 48 hours prior to shutting down or bypassing the pipeline to be rehabilitated.

Equipment shall be equipped with a specially designed, acoustically-silenced enclosure intended for use in any application where pumping is required and engine and other noise must be kept to a minimum. The sound levels shall be within the limits specified in the City of Flagstaff codes or 69dBA at 30 feet. The bypass pumping system shall be of adequate capacity and size to handle the required flows with redundancy to bypass if the largest temporary pump is out of service.

The Contractor shall consider the existing conditions and ground features when designing and installing the aboveground discharge pipe system. Access to driveways shall be maintained.

615.4.1.2 Materials:
Bypass piping shall be polyethylene pipe with Standard PE Code Designation PE3408 as defined in AWWA C906, have a minimum Cell Classification of PE 33443C as defined in ASTM D3350, designed using Hydrostatic Design Basis of 1,600 psi as specified in ASTM D2837.

615.4.1.3 System Monitoring:
The wastewater levels in the upstream and discharge manholes shall be continuously monitored for the first 24-hours of operation by an on-site representative of the Contractor. After the first 24-hours of monitoring, the Engineer may allow the Contractor to perform monitoring only during daytime hours so long as the site is secured. The representative shall be Contractor staff and/or a subcontractor that has been directly responsible for the bypass pumping of sewage flows during completion of a similar pipeline rehabilitation project. The qualifications of the staff or subcontractor shall be submitted to the Engineer for approval 10 business days prior to any bypass pumping work.

615.4.1.4 System Maintenance:

The Contractor shall provide qualified personnel on-site 24 hours per day to maintain the bypass system. The Contractor shall maintain sufficient on-site equipment and materials to ensure continuous and successful operation of the bypass system. This includes a sufficient number of valves, tees, elbows, connections, tools, sewer plugs, piping, fuel, and other parts or system hardware to ensure immediate repair or modification of any part of the system as necessary.

All equipment shall be placed on a new plastic tarp, adequately sized and bermed to protect against fuel, oil, and hydraulic fluid spills. The Contractor is responsible to notify the Engineer for immediate and proper cleanup should any spill occur, regardless of amount. The Contractor shall repair, without cost to the Owner, any damage that may result from its negligence, inadequate or improper mechanical or electrical failures.

615.4.1.5 Measurement and Payment:
Bypass pumping required to install the sewer system as shown on the plans while keeping the mains in service is considered incidental to the sewer items on the bid form with no additional compensation.

615.7 Sanitary Sewer Service Taps:
(revise to include)

615.7.1 Sewer Service Cleanouts:
Sanitary sewer services will be installed per M.A.G. Detail No. 440-3 – Type 'C' Sewer Building Connection modified as follows:
The cleanout assembly shall be located behind the sidewalk and may be located on either side of the property line.
Exclude the electronic ball markers.

Revise two of the notes in profile view as follows:
1. Revise the 1-way clean out to read - 2-way clean out with single riser.
2. Revise the #1 meter box per detail 320 to read - Frame and Cover per detail 270 (concrete required in paved areas only).

Cleanout location is preferred to be within 5'behind the sidewalk. Due to the site conditions such as masonry walls at the back of sidewalk, there are locations where the cleanout will need to be placed in the sidewalk with a frame and cover per detail 270.

615.7.2 Sewer Service Abandonment
Several sewer services connections have been identified by TV logs that are not believed to be in service. A sewer service that is not in use may be abandoned in place and no new service will be constructed in the location. Contractor shall investigate appropriately to be absolutely sure that there is no existing use of the service.

If additional services are discovered that appear to not be used, the Contractor must contact the Utilities Department to gain approval to abandon in place and not construct the replacement service.

All work to locate or determine active or abandoned sewer services is incidental to the contract.

SECTION 616 – RECLAIMED WATER LINE CONSTRUCTION:

616.1 General

(revise to include)

The contractor is to schedule and complete the reclaimed water main realignment in the intersection of Aspen Avenue and Bonito Street within 30 days of notice to proceed.

The contractor shall provide the City Utility Department with two (2) weeks' notice on the scheduled shut down required for the realignment and the affected property owners with one (1) week notice of the shut down.

SECTION 618 – STORM DRAIN CONSTRUCTION:

618.2 MATERIALS:

(Revise to include)

The approved manufacturer of 40" x31"" Smooth Wall SRP, storm pipe is shown below. The smooth wall SRP storm pipe must meet or exceed the pipe manufactured by:

Contech
ULTRA FLO 14 guage

SECTION 630 – TAPPING SLEEVES, VALVES AND VALVE BOXES:

630.10 VALVE REMOVAL AND ABANDONMENT:

(revise to include new sub-section)

Valves on a water line to be abandoned shall be abandoned in place using the following procedure: close the valve, remove box, and then slurry backfill. If the valve is on a water main that is required to be removed, the valve shall also be removed.